

INSTALLATION INSTRUCTIONS

CE 0088

for the

TM **Asepsis 21 Wall/Cabinet Mounted Unit** *(Delivery System)*

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INSTALLATION INSTRUCTIONS

for the

Asepsis 21TM Wall/Cabinet

Mounted Unit (Delivery System)

SECTION I - REQUIREMENTS

1. PHYSICAL REQUIREMENTS

Before installing, ensure that the physical requirements of the unit are met (See Figure 1).

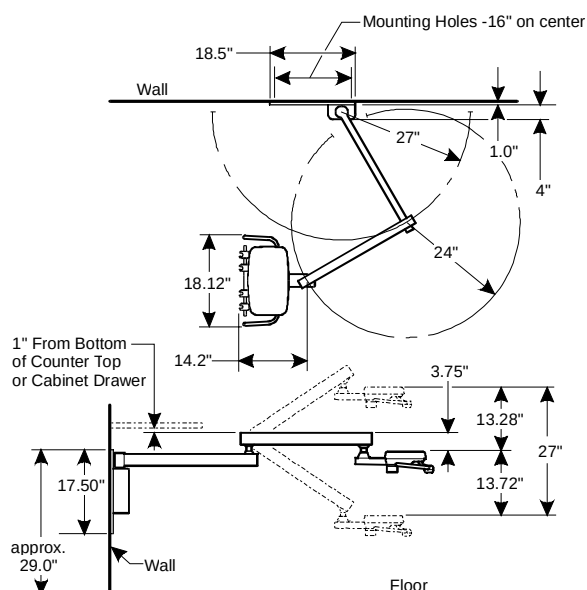
2. ELECTRICAL REQUIREMENTS:

Before connecting the line cord to an appropriate receptacle, make certain that the circuit is protected by a 15-amp circuit breaker for 120-VAC models, or a 7.5-amp breaker for 240-VAC models. Ensure that all wiring is grounded and all electrical codes are observed.



WARNING - Potential shock hazard with possible personal injury. To reduce shock hazard, observe all electrical codes.

Figure 1



3. WATER SUPPLY REQUIREMENTS

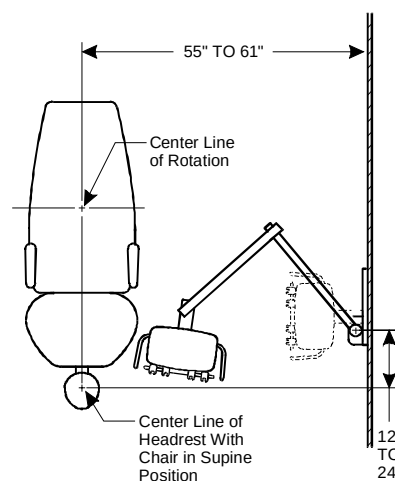
A 1/2 I.D. copper supply line, reduced to 3/8" O.D. copper tubing as near the shut-off valve as possible is required. The water pressure should be in the range of 30-50 psi. A suitable pressure reducing valve is essential for trouble free operation if the pressure exceeds the recommended range.

4. AIR SUPPLY REQUIREMENTS

A 1/2" I.D. copper supply line reduced to 3/8" O.D. copper tubing as near the shut-off valve as possible is required.

The air pressure must be between 75-100 psi at the valves. A pressure reducer should be installed if the pressure exceeds 100 psi.

For maximum life and trouble free operation, the air supply must be clean and dry. It is recommended that a moisture separator and filter be installed as near the connection as possible and accessible for periodic cleaning.



SECTION II - INSTALLATION

1. UNPACKING THE CARTONS

The wall mounted unit is shipped in a carton containing the following items:

- Asepsis 21 instrument head and arm
- Optional equipment
- Small parts box
- Either a valve block kit or a utilities connection box (J box)
- Installation instructions (this manual), an operator's manual, and warranty card

Check for signs of damage to the carton or to the contents. Make sure all items listed above are present. If there is any evidence of damage due to shipping or if any of the items are missing from the carton, notify the shipper at once. Be careful not to discard any small parts or instruction sheets with the packing material.

2. OPTIONAL UTILITIES CONNECTION BOX (J BOX) INSTALLATION

To install the J box use the installation plan TP1046 supplied with the connection box. This plan may be used as a template to locate the utilities for connection. The installation of the utilities connection box should be performed by a qualified technician.

Please consider the following before beginning:

- The connection box can be installed anywhere in the room within the range of the 8 foot umbilical that will connect the box to the unit. Locate the box where the incoming service lines will not cause an obstruction.
- Air and water are the only services required unless a heated syringe or lighted handpieces are to be used.
- Waste lines, vacuum lines or auxiliary low voltage wiring are not necessary unless separate devices requiring these services are to be used.
- The location of the incoming services on the installation plan are suggestions and can be altered to suit the situation.

3. ELECTRICAL CONNECTIONS TO THE CONNECTION BOX (J BOX)

Domestic - Make the electrical connections to the J box as shown in Instruction TPW1487.

International - Make the electrical connections to the J box as shown in Instruction TPW1511. These J boxes have accessible fuses located on the front of the box.



DANGER: Turn off all electrical power at the power source before making primary electrical connections.

RATING FOR 120 VOLT UNIT

KNIGHT by MIDMARK, Versailles, Ohio, USA		
120 VOLTS	50/60 HERTZ	AIR 80/100 PSI WATER 30/50 PSI
15 AMPS MAX TOTAL CONNECTED LOAD		
THIS EQUIPMENT IS RATED TYPE I, CLASS B 		

RATING FOR 240 VOLT UNIT

KNIGHT by MIDMARK, Versailles, Ohio, USA		
240 VOLTS	50/60 HERTZ	AIR 80/100 PSI WATER 30/50 PSI
7.5 AMPS MAX TOTAL CONNECTED LOAD		
THIS EQUIPMENT IS RATED TYPE I, CLASS B 		



CONFORMS TO
UL STD. 544
CERTIFIED TO
CAN/CSA - C22.2
NO. 125-M1984



SECTION II - INSTALLATION (CONT)

4. INSTALLING THE UNIT

NOTE

NOTE: The unit can be attached to any wall or cabinet structurally sound enough to support the unit in operation. Please use the following instructions if the unit is mounting to a wall. For mounting to a cabinet, refer to the instructions packaged with the cabinet mount:

1. Using the four hex head screws and washers provided, attach the frame to the wood studs of a wood frame constructed wall (16" on center), See Figure 2.
2. Attach the frame cover to the frame using the four cover screws provided.
3. Attach the bearing assembly to the cover and frame with the hex screws, lockwashers and flatwashers provided.
4. Mount the unit on the bearing assembly by feeding the tubing through the top and attaching the umbilical to the underside.
5. Slide the end of the unit arm into the bearing assembly making sure the nylon washer is in place.
6. Attach the umbilical strain relief bracket to the frame cover with the screws provided.
7. Carefully remove all packing material from the unit and read all information tags and labels.
8. Screw the stop rotation screw into place using the 3/16" allen wrench provided.



CAUTION: The stop rotation screw must be installed to prevent the arm being rotated completely around several times, which would twist the wires.

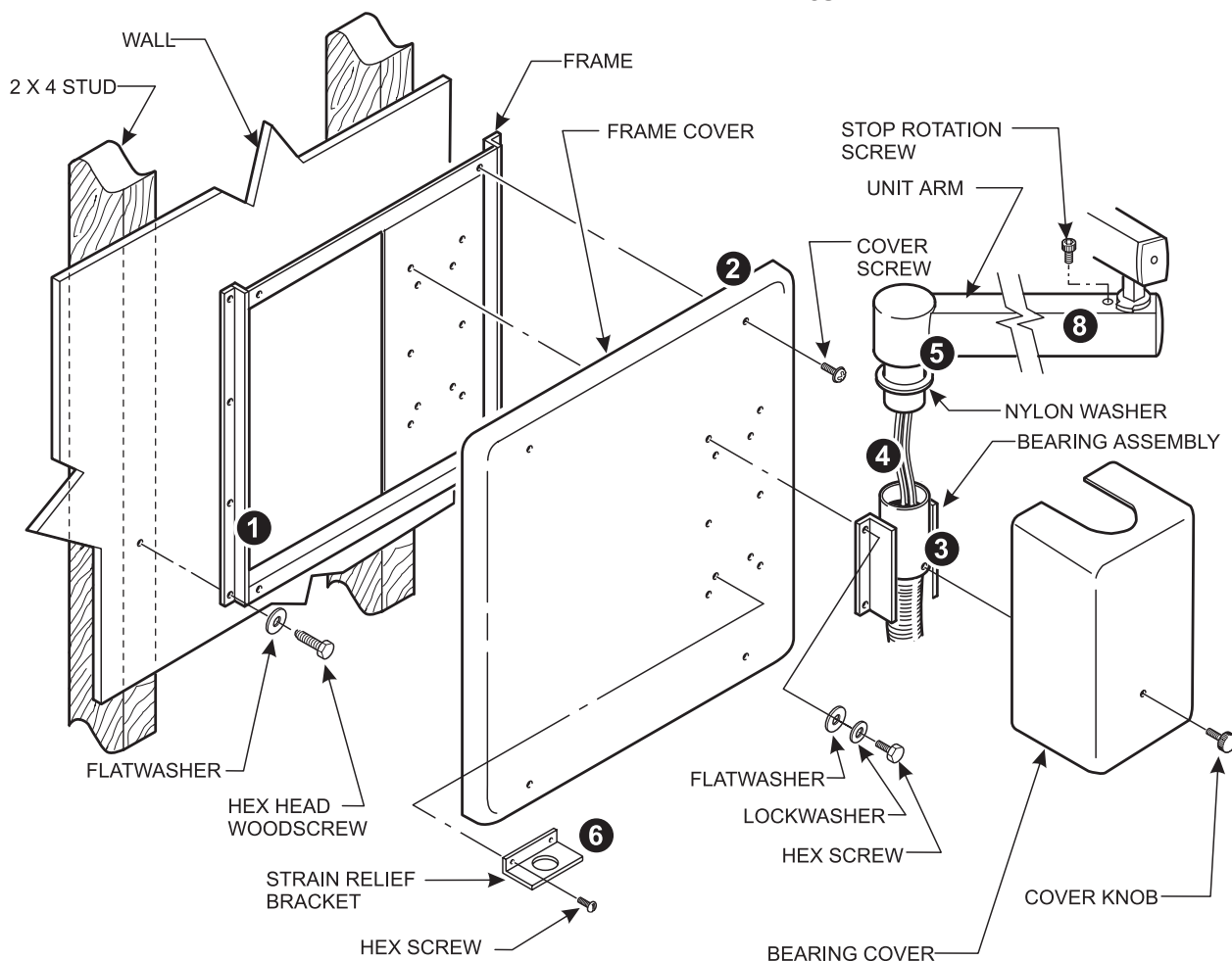


Figure 2

SECTION II - INSTALLATION (CONT)

5. PREPARING THE FLEX ARM

The flex arm has a built in locking mechanism controlled by a toggle switch located on the underside of the instrument head. Refer to Figure 3 and use the following procedure to prepare this feature for use:

1. Remove the end cap.
2. Slide the flex arm cover back to expose the interior of the flex arm.
3. Remove the wire tie which will release the lock pawl from the latch block.
4. Check the vertical movement of the flex arm. The flex arm tension is adjusted at the factory and should not require adjustment. However if adjustment is desired, simply tighten the tension nut to increase tension or loosen the tension nut to decrease tension.
5. Slide the flex arm cover into position taking care to position the bottom cover in its track.
6. Replace the end cap.

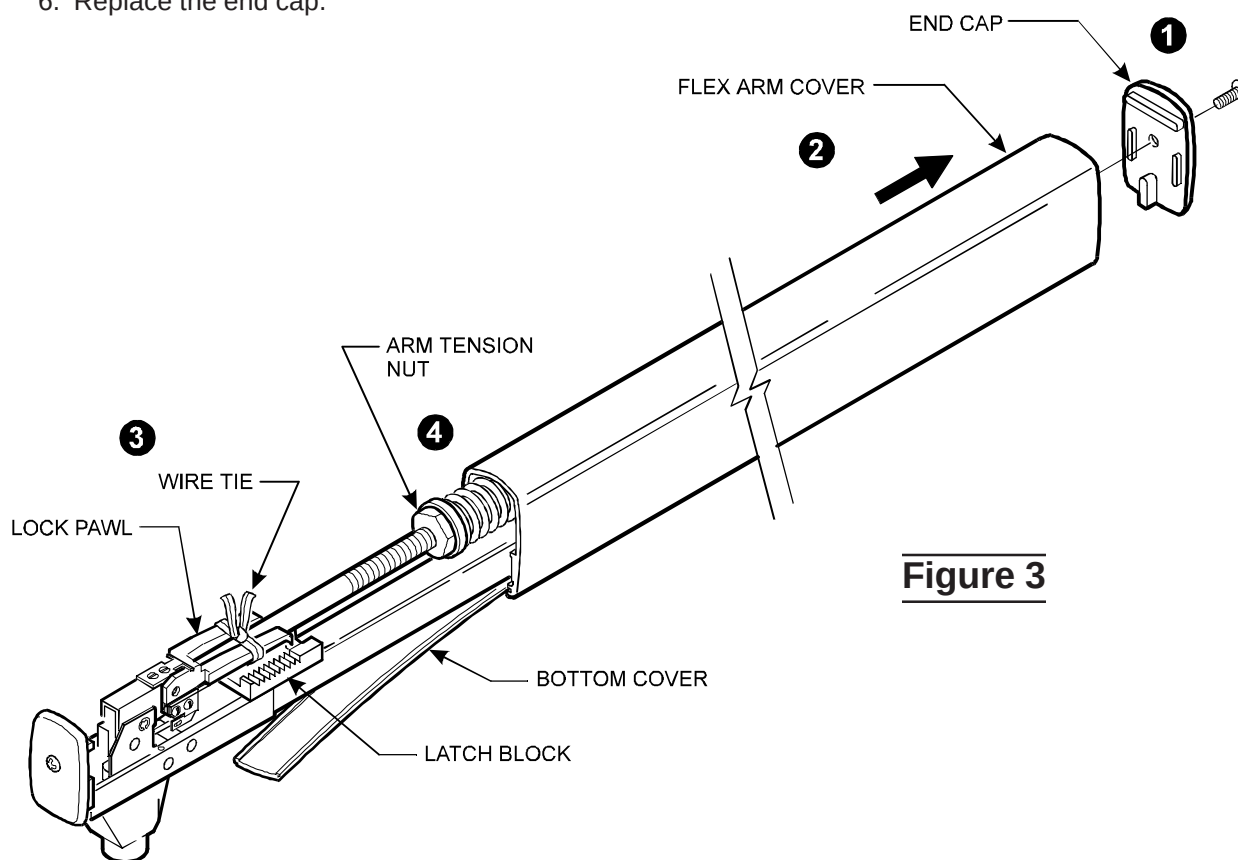


Figure 3

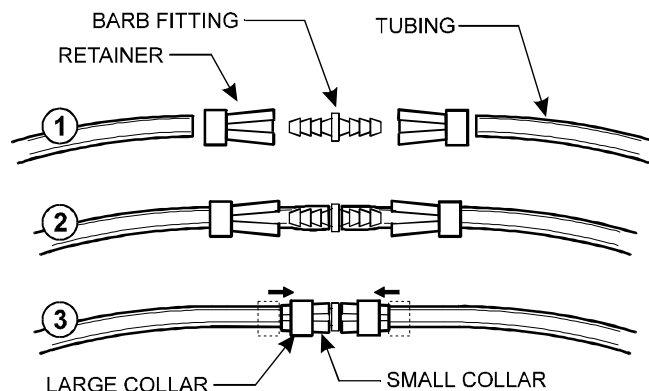
SECTION II - INSTALLATION (CONT)

6. TUBING CONNECTIONS

When connecting the umbilical tubings to the unit or other tubing, use the plastic retainers to secure the connection (Refer to Figure 4).

1/8" Tubing Connection

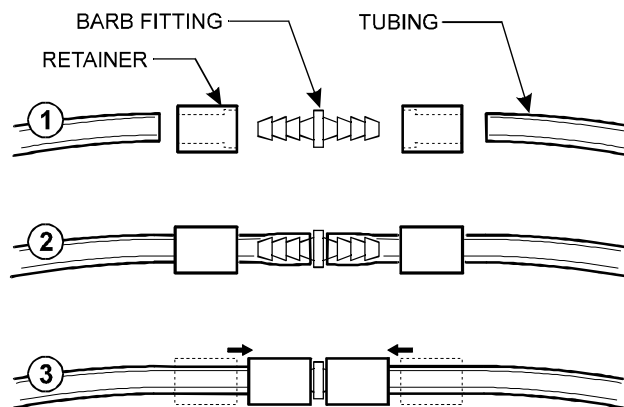
1. Slip the retainer (large end first) onto the tubing.
2. Push tubing onto the barb fitting and slide the retainer forward over the tubing on the barb fitting.
3. Break the large collar loose and slide it toward the fitting and over the small collar.



1/8" TUBING CONNECTION

1/4" Tubing Connection

1. Slip the retainer onto the tubing with the large opening toward the end of the tubing.
2. Push the tubing onto the barb fitting.
3. Slide the retainer over the tubing on the barb fitting.



1/4" TUBING CONNECTION

Figure 4

SECTION II - INSTALLATION (CONT)

7. UMBILICAL TUBING CONNECTIONS TO THE UTILITIES CONNECTION BOX (J BOX) (OPTIONAL)

If a J box is used, refer to Figure 5 which shows the connections to be made inside the J box. Installation plan 003-1190-00 is supplied with the J box and may be used as a template to locate the utilities for connection. The installation should be performed by a qualified technician.

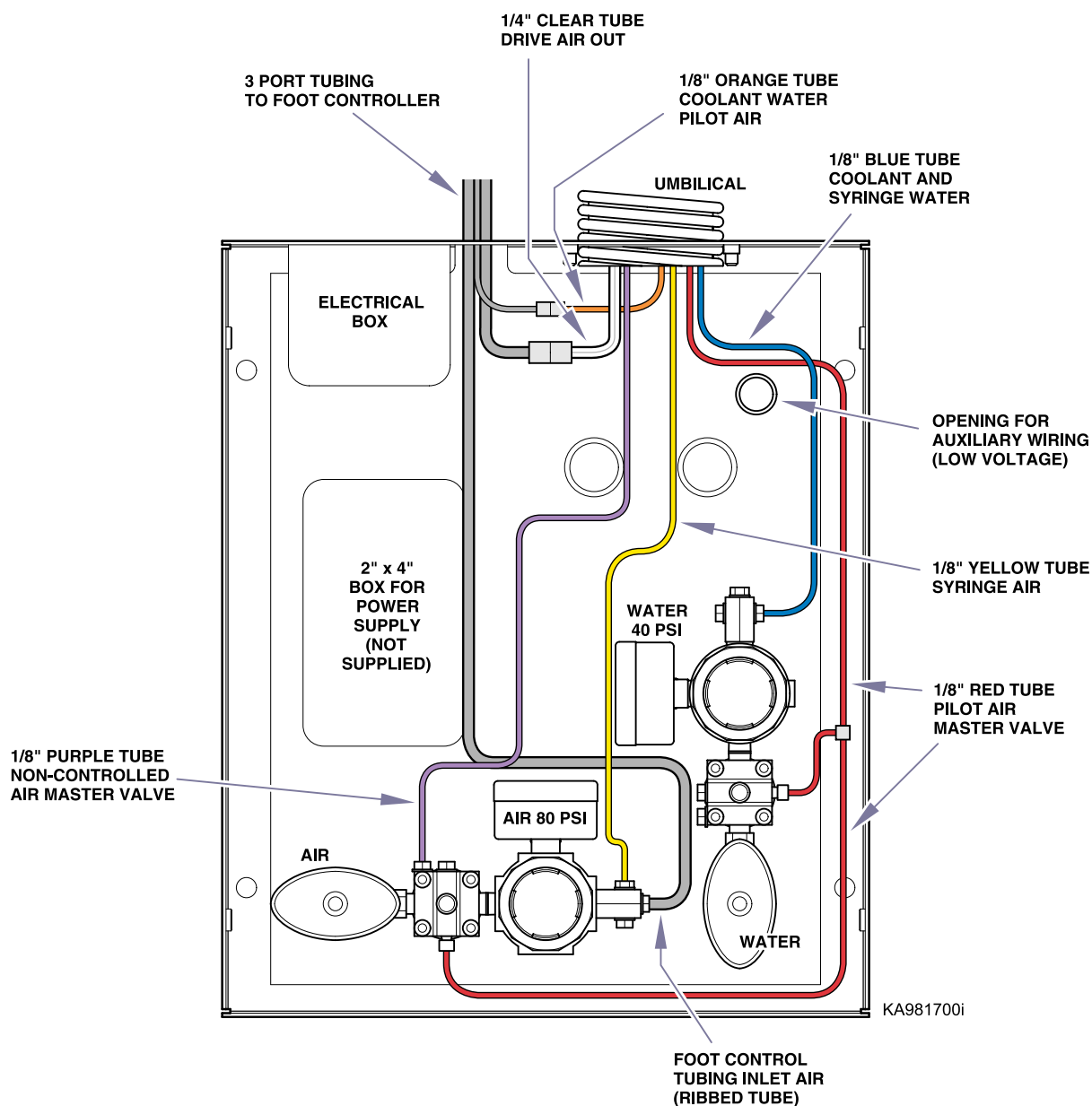


Figure 5

SECTION III - CONTROLS

1. ASEPSIS 21 HANDPIECE DELIVERY SYSTEM CONTROLS LOCATED UNDER COVER

A complete set of handpiece and syringe adjustments are located directly under the magnetically held cover for protection against contamination. Lift up either back corner of cover for easy removal. All controls are labeled with symbols identifying their function. A description follows and their locations are identified below.

1 2 3 HANDPIECE COOLANT WATER VOLUME

Adjusts the amount of coolant water to each respective handpiece.

4 5 6 DRIVE AIR PRESSURE SETTING

Individual adjustments are provided - one for each respective handpiece. Use to set maximum handpiece pressure indicated on gage. Refer to handpiece manufacturer's specifications for proper setting.

7 SYRINGE AIR VOLUME ADJUSTMENT

Controls the volume of air to the syringe and effects air water spray pattern.

8 SYRINGE WATER VOLUME ADJUSTMENT

Controls the volume of water to the syringe and effects water spray pattern.

9 COOLANT AIR VOLUME ADJUSTMENT

This adjustment controls the volume of coolant delivered to each handpiece. It effects the spray

pattern of air and water at the handpiece. If the handpiece has a coolant air connection in the handpiece itself, this adjustment will have no effect and can be completely shut off.

10 HANDPIECE PRESSURE GAGE

Indicates individual handpiece pressure when handpiece is operating.

11 12 13 MAGNETIC LATCHES

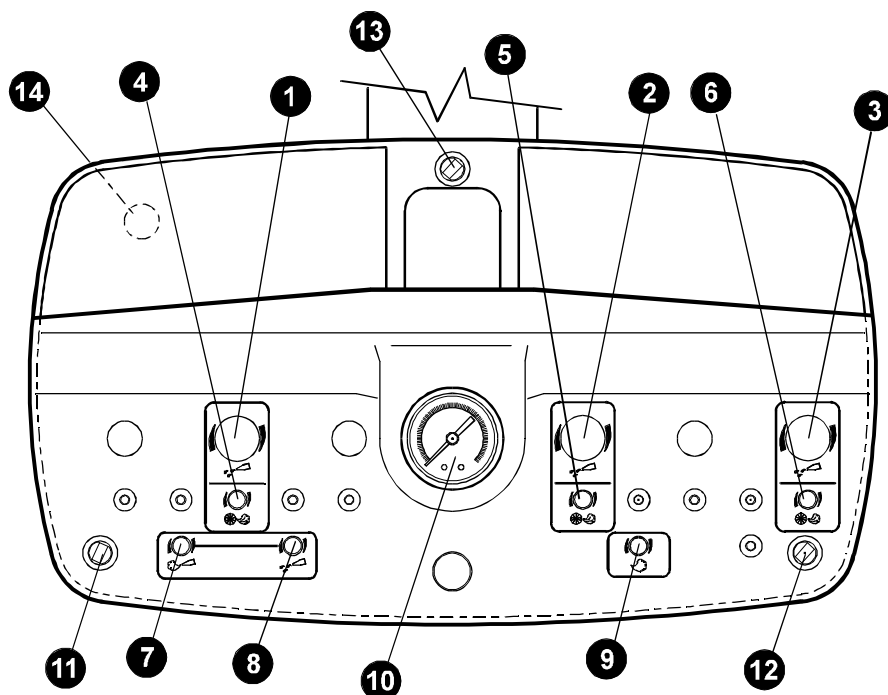
These hold the cover in place.

14 HANDPIECE COOLANT WATER FLUSH BUTTON

controls the coolant water flush valve located on the underside of the delivery head.

Figure 6

**ASEPSIS 21 INSTRUMENT HEAD
WITH TOP COVER REMOVED**



SECTION III - CONTROLS (CONT)

2. EXTERNAL CONTROLS AND FUNCTIONS

MASTER ON /OFF VALVE

Located on the bottom of the instrument head directly behind the handpiece holder bar support, this two position toggle control turns the main air and water on or off the utilities box. Up position is on.

ARM LOCK

Located on the bottom of the instrument head , this two position toggle controls the arm lock mechanism.

AUTOMATIC HANDPIECE ACTIVATION

The automatic kink valves are designed to permit activation of the selected handpiece when it is removed from its holder. Drive air will be delivered to the withdrawn handpiece when the foot control is depressed.

WET/DRY FOOT CONTROL

The disc-type foot control operates the selected handpiece at varying speeds depending upon the foot pressure applied to the disc. Positioning the coolant water selector toggle allows coolant water for wet cutting to be selected by the motion of the foot. Applying foot pressure to the disc will operate the selected handpiece and, if turned on, water spray.

WATER ON/OFF VALVE

Located on the foot control, this switch provides water for coolant spray to the handpiece when the switch is moved forward to the On position (toward blue dot) and the foot control is depressed (wet cutting). When the valve is in the Off position, water will not be delivered to any handpiece.

SECTION IV - PURGING AND TESTING THE SYSTEM

When the installation is complete you should purge the system to clear the tubing of any foreign material and to purge the air out of the water tubing. This also serves to test the equipment for proper function.

1. Before attaching the handpieces, turn on the air, water and vacuum to the utilities connection box.
2. Open the shut-off valves in the utilities connection box.
3. Turn on the master valve lever on the Asepsis 21 head.
4. Lift the cover off the Asepsis 21 head and turn the coolant water and coolant air volume controls adjustment knobs completely open.
5. Remove a handpiece hose from its holder.
6. Depress the foot control to operate the coolant water and drive air for 30 seconds.
7. Depress the coolant water flush button on the underside of the Asepsis 21 head to allow the water to flow for 30 seconds.
8. Repeat this procedure with each handpiece hose.
9. Operate the air and water for both doctor and assistant's syringes for 30 seconds.
10. Install the handpieces.
11. Set the coolant water and coolant air volume controls to the desired position.

SECTION V - FINAL CHECK LIST

When all the assembly and installation procedures are completed, the unit should be checked out in accordance with the following check list to ensure that assembly is complete and that all controls function properly.

- ☐ Check complete system for any air or water leaks.
- ☐ Check to make sure there is proper air and water flow to the handpieces.
- ☐ Check the Asepsis 21 handpiece delivery system for proper function.
- ☐ Check the syringes for proper function and water flow.
- ☐ Make sure that the unit has been cleaned and that all dirt and finger prints have been removed.
- ☐ Be sure the person who will operate the unit receives the Operator's Manual and any other appropriate information or instructions.
- ☐ If any optional equipment has been installed, make sure it is properly installed and functioning as intended.

NOTES

NOTES

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DECLARATION OF CONFORMITY



MIDMARK CORPORATION

Midmark Corporation declares that SW and S-21 Dental Units conforms to the applicable requirements of the Medical Device Directive 93/42/EEC, Annex V and VII.

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